

REMARKS

Claims 1-27 were pending in the present application. Claim 11 was withdrawn from consideration. By virtue of this response, claims 4, 12, 16 and 22 have been cancelled, claims 1, 2, 5-8, 10, 14, 15, 17, 19-21 and 23-27 have been amended. Accordingly, claims 1-3, 5-10, 13-15, 17-21 and 23-27 are currently under consideration. Amendment and cancellation of certain claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented. No new matter has been added.

Concerning the Drawings

The attached sheets of drawings includes changes to Figures 7, 8 and 9. In particular in response to the Examiner's objection, Figures 7, 8 and 9 now include the caption "Prior Art". Applicant believes this overcomes the Examiner's objection.

Objections

The Office Action objected to claim 1 because the term "PN junction surface" should read as: -- PN junction interface--. With this Communication, claim 1 has been amended as suggested by the Examiner to recite a "PN junction interface". Thus, it is believed that this objection is overcome.

The Office Action objected to claim 7 because it failed "to clarify whether the recited dielectric thin film is definitely comprised in the claimed structure." With this Communication, claim 7 as been amended to recite "the metal thin film is formed of an AuBe vapor-deposition film or an Au vapor-deposition film via the dielectric thin film . . ." Thus, it is believed that this objection is overcome.

The Office Action objected to claims 8, 14-17 and 19 because the term "the Ni vapor-deposition film" lacked antecedent basis in the claims. With this Communication, claim 1 has been amended to recite a "metal thin film" and claims 8, 14, 15, 17 and 19 have been amended to delete

the term “Ni vapor-deposition film” and recite a “metal this film”. Additionally, claim 16 has been canceled. Accordingly, it is believed that this objection is overcome.

The Office Action objected to claims 2, 10 and 20-27 for failing to clarify which of two substrates recited in claim 1 was referred to. With this Communication, claims 2, 10 and 20-27 have been amended to more clearly recite “a transparent substrate”. Thus, it is believed that this objection is overcome.

Rejections under 35 U.S.C. §103(a)

Claims 1-6, 8, 10, 12-18, 20-24 and 26 are rejected as allegedly being unpatentable over Chu et al. (“Chu”, US 2002/0117672 A1) in view of Okazaki (“Okazaki”, US 5,670,797; of record).

With this communication, claim 1 has been amended to recite a light-emitting diode including at least a transparent substrate, a semiconductor layer laminated on the transparent substrate, a pair of electrodes for applying voltage to the semiconductor layer and a light reflecting layer. Additionally, amended claim 1 recites that one of the electrodes is formed above the semiconductor layer via the light reflecting layer.

Okazaki discloses a light-emitting device having an insulating substrate 17 which is made of glass epoxy resin, composite, or other materials (Okazaki, col. 5, lines 62-66). Additionally, Chu et al. discloses an LED structure having a plated mirror layer 205 formed on a transparent substrate 201 (Chu et al. Fig. 2; p. 3, paras. 28-29). Nowhere, however, does either Okazaki or Chu et al. disclose that an electrode is formed via a light reflecting layer, as recited by amended claim 1. Okazaki does not even disclose a light reflecting layer, thus, electrodes in Okazaki could not be formed via a light reflecting layer.

Because neither Chu et al nor Okazaki disclose an electrode formed via a light reflecting layer, neither Chu et al., Okazaki nor any hypothetical combination of the two references could render amended claim 1 unpatentable. Accordingly, Applicant respectfully requests withdrawal of the rejection.

Claims 2, 3, 5, 6, 8-10, 12-15, 17-21, 23, 24 and 26 are each ultimately dependent on claim 1. Thus, claims 2, 3, 5, 6, 8-10, 12-15, 17-21, 23, 24 and 26 are also patentable over the cited references and Applicant respectfully requests withdrawal of the rejection.

In addition to the above rejection, claims 7, 9, 19, 25 and 27 are rejected as allegedly being unpatentable over Chu et al. in view of Okazaki, as applied to claims 1-6, 8, 10, 12-18, 20-24 and 26 and in view of Morita et al. ("Morita et al.", US 6,121,636). However, nowhere does Morita et al. disclose an electrode formed via a light reflecting layer. And, claims 7, 9, 19, 25 and 27 are each ultimately dependent on claim 1. Thus, for the reasons discussed above, claims 7, 9, 19, 25 and 27 are patentable over Chu et al., Okazaki and Morita et al. and withdrawal of the rejection is respectfully requested.

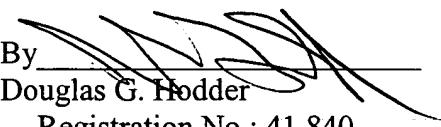
CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 259052002900. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

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Attachments